City Trees Enhance Community Safety

Peter Duinker, Halifax Tree Project

2020-11-16

We can think about the relationships between urban trees and community safety in quite a few ways. I will address several that come immediately to mind: (a) street trees and safety in the context of motor vehicles; (b) neighbourhood trees and their influence on crime rates; and (c) trees and woodlands in relation to places to hide.

I draw mainly upon Kathleen Wolf's writings (e.g., Wolf, 2006) for insight on how trees influence safety of humans in urban streets. On one hand we can think about pedestrians on sidewalks and their perceptions of risk from all the motor vehicles passing by. Most pedestrians would, perhaps unconsciously, feel safer if there were trees between them and the vehicles rather than just a curb (see the photos of Boland St. and Church St.). Curbside parking does help to separate moving vehicles from pedestrians, but that just loads the streetscape with more vehicles and asphalt, neither of which enhances the streetside ecosystem from ecological and social points of view.

Wolf's (2006) article speaks to the role of trees in vehicle collisions. It is true that when a car hits a tree, especially at high speeds, there can be dire consequences for the driver and any passengers. But is the tree to blame? Perhaps if the tree were located inappropriately in relation to vehicle movements, then yes, but almost invariably the blame belongs elsewhere, usually on the driver. Research has shown that drivers slow down in narrow, tree-lined streets, so one could argue that the trees not only make the street ecosystem a more pleasant place for people to be outdoors but a safer one too.

I looked to a recent report by Hanson and others (2016) for a summary of research on the influence of city trees on crime rates. Studies in the US mostly indicate an inverse relationship between tree populations and crime rates - thus, the more tree cover there is, the lower the crime rate. One hypothesis for this relationship is that the higher the tree cover, the more inclined people are to spend time outdoors and that puts more eyes on the neighbourhood. But this can be a dangerous over-generalization because the influences of trees on human behaviour go far beyond the mere density of trees. Another hypothesis is related to the observation that, in general, tree cover is higher in wealthier neighbourhoods where there is also a lower crime rate. Thus, the tree cover may not actually be serving as a driver for crime rate.

My sense is that trees are seen in many circumstances to represent good hiding places - sometimes for good (bring Robin Hood and Sherwood Forest to mind, or when somebody is being pursued in a woodland and needs a place to catch a breath) and sometimes for bad (for example, persons intent on assaulting others or robbing premises, drug deals, illicit habitation). In the circumstance of a lot of good hiding places provided by trees in a neighbourhood where crime is an issue, it's no wonder residents there would dislike trees!

Perhaps it works this way. When a neighbourhood is considered as safe by its inhabitants, trees are welcome in the area. On the other hand, when the community is considered as prone to crime, then trees may be unwelcome. In the latter case, perhaps high visibility through outdoor landscapes can engender a stronger sense of safety, so keeping tree crowns well above head height may be warranted. Stem density may also be important here. You can get the same amount of tree foliage per unit area with widely spaced trees (to a limit, of course) as you can with crowded trees. People probably feel safer in a wooded area with widely spaced trees.

There is an approach to community safety called Crime Prevention Through Environmental Design (CPTED for short). One of its principles is that of natural surveillance, which holds that the greater the level of visibility in and through an area, the less likely it will be subject to criminal activity. I have no trouble buying into that principle. However, a few years ago my students at Dalhousie University undertook interception surveys of pathway users in Point Pleasant Park. One of the questions asked of those who chose to participate was related to the feeling of safety people had on the pathways given that the newly regenerating forest (after Hurricane Juan) prevented one from seeing more than a few metres into the forest. Among the few hundred people interviewed, overwhelmingly people said that they had no anxiety at all about the inability to see deeper into the woods. Who knows what motivated this tendency in the answers - perhaps Point Pleasant Park is considered a safe space for recreation. I can think of a few other wooded areas on the peninsula of Halifax where, even in broad daylight, I would want my total wits about me if I were to wander through those woodlands. Not going to such places at all would be best, but if one must go, not going alone is the first measure of anxiety reduction. Additionally, going to such woodlands in the dark, with no targeted lighting, is also anxiety-producing. However, I feel this way pretty much anywhere outdoors in the pitch black.

A safety issue I did not touch on yet is that of tree parts such as branches falling to the ground and injuring people or property. In the grand scheme of things, considering all the risks we face in life, this is a relatively low-probability issue. Of course, the risk can be reduced with proper tree pruning to remove dead branches and weak crown elements.

To sum up, the first order of business in determining how to ensure that trees in a neighbourhood do not raise people's concerns about safety of person and property is to have appropriate conversations with the residents. How trees make people feel is paramount to a community's receptivity to more and better trees. Indeed, involving local people in the decision-making about urban-forest improvements in their neighbourhood is perhaps more important than getting the technical aspects of such work right.

References

Hanson, P., M. Frank, and others. 2016. The Human Health and Social Benefits of Urban Forests. Dovetail Partners, Inc., Minneapolis, MN.

Wolf, K.L. 2006. Roadside urban trees: balancing safety and community values. Arborist News [Dec 2006]:56-57.